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ABSTRACT

This sample national survey compares results for students in the eleventh grade in 1970 to the Project TALENT national survey of high school students conducted in 1960. Several important conclusions resulted from this survey: 1) there has been little improvement in reading skills in the first eleven years of schooling; 2) guidance programs appear to have been more effective in recent years than prior to 1960. Although progress has been made, improvement in guidance procedures and individual planning is needed; 3) there has been little improvement in the quality and effectiveness of the instructional programs; 4) students report they are working more, studying less, and reading books to about the same degree as in 1960; 5) there is a decrease in the number of absences over 15 days; and 6) a slight, but consistent trend in poorer health than in 1960 is linked to the increased use of stimulants. The study indicates that there is an urgent need for the development of educational programs designed to make major improvements in the quality of education. A sample of the survey, which includes weighted responses, is appended. (TA)

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PROGRESS IN EDUCATION - 1960-1970: A SAMPLE SURVEY

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The Project TALENT national survey of high school students in 1960 not only showed that high school students were deficient in reading comprehension and other educational skills, but also that they had unrealistic educational and occupational plans and were dissatisfied with their school programs. To check on progress in these latter areas, the students in the 1970 sample were asked a number of the same questions included in the 1960 survey.

As in 1960, relatively few of both the boys and the girls report they are "very definite" or "completely decided" in their choice of an occupation. In 1970 only 25.5% of the total group indicated one of these choices. This represented a slight decrease from 1960. There was also a slight trend away from the indefinite or completely undecided choices with 43.2% indicating they were "fairly definite."

The 1970 data indicate a definite trend toward a later decision on occupational choices. Thirty-one percent of both the boys and the girls indicated that their present choice had been made this year as compared with 23% in 1960. There were also only 16% of the boys and 11% of the girls who reported they had not decided upon an occupation. These figures represented reductions of about five percentage points from the 1960 figures. These figures indicate an improvement in the effectiveness of the guidance programs in the high schools which is supported by data to be reported later.

A number of questions were asked about how important each of several factors was to them in their choice of a job. In 1970 nearly three-quarters of the boys and more

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than three-quarters of the girls said that "work that seems important to me" was "very important" or "extremely important" in their choice of jobs. This was also reported in 1960 as the most important factor for both boys and girls, however the proportion giving it great importance increased somewhat over this period.

A number of the other factors in their choice of jobs changed markedly between 1960 and 1970 for both boys and girls. "Freedom to make my own decisions" became much more important for both boys and girls in 1970. For the boys it became the second most important factor with 64% rating it "very important" or "extremely important" as compared with 59% in 1960. For the girls, the change was even more dramatic with those according it great importance changing from 52% to 65% in 1970. "Meeting and working with sociable, friendly people," however remained the second most important thing to the girls with 72% indicating it to be "very important" or "extremely important" as compared with about 57% of the boys giving it this importance. These represented very little change from 1960.

The other three factors all showed decreases in the importance given them in 1970 as compared with 1960. The largest drop in the proportion rating a factor "very important" or "extremely important" was for "good income to start or within a few years." This dropped 14 percentage points for both boys and girls. In 1970, 44% of the boys and 37% of the girls ranked this factor as "very important" or "extremely important." "Opportunity for promotion and advancement in the long run" dropped about 8 percentage points for the boys and 15 percentage points for the girls. The 1970 figures were 61% for the boys and 47% for the girls rating it as "very" or "extremely important." Similarly, job security and permanence dropped 8 percentage points for the boys and 10 percentage points for the girls so that the 1970 figures were 59% and 52% reporting it "very" or "extremely important."

This trend toward "freedom of choice" and away from "high salary," "job security," and "opportunity for promotion" seems characteristic of the new values of today's

young people. However, it should be emphasized that particularly for the boys, opportunity for promotion and job security are still rated as "extremely" or "very important" by about 60% of them.

With respect to educational plans, 61% of the boys and 55% of the girls expect to obtain some regular college training. This represents only a 1% increase for the boys, but a 10% increase for the girls. The numbers of boys and girls planning other types of post-high school training also show increases so that only 14% of the boys and 15% of the girls indicate they do not expect to get any education beyond high school. This represents a substantial drop from the 28% and 29% who indicated such expectations in 1960.

These plans are generally corroborated by the reports of the students regarding the high school curriculum in which they are currently enrolled. Forty-six percent of the boys and 43% of the girls report being enrolled in the college preparatory course. This is about the same for the boys, but represents a 6 percentage point increase for the girls. There is an increase for both boys and girls in the vocational course and the general course enrollments and decreases for both groups in the agriculture and commercial or business courses. The agriculture program shows an especially large decrease to 4% of the boys and 1% of the girls indicating enrollment in such programs. Parental expectations regarding post-high school education appear not to have changed much between 1960 and 1970 for the boys with an unrealistic 59% still expected to obtain a college degree or a higher degree. For the girls this figure has increased from 42% to 49% in 1970.

There is a trend, especially for the girls, to discuss plans for after high school with school counselors to a greater extent. For example, 60% of the girls reported having discussed post-high school plans with a counselor. The comparable figure is 53% for the boys. These represent increases from 46% for the girls and 49% for the boys in 1960. On the other hand, there is a definite trend for less

discussion of plans after high school with teachers and principals with 34% and 38% of the boys and girls respectively having had such discussions in 1970 as compared with 56% and 54% in 1960. Discussions with parents have not changed very much over the ten year period except that the girls talked less with their fathers and the boys talked less with their mothers about plans after high school. In both instances there is a smaller tendency for less discussion with the other parent.

The Five Year Follow-up of the 1960 Project TALENT sample indicated that only 12.5% of the eleventh grade males and 22.4% of the eleventh grade female students planned the same career five years after finishing high school that they were planning when in the eleventh grade. It was also found that many of the eleventh graders in 1960 selected very inappropriate occupations in terms of their ability level. To check on the apparent appropriateness of the occupational choices of eleventh graders in 1970, an analysis was made of the ability level as shown by their reading comprehension score of the groups planning an occupational career in each of 35 fields.

It is very encouraging to note that the eleventh grade male students indicating that they are planning careers as biological scientists, lawyers, mathematicians, physicists, political scientists or economists, and sociologists or psychologists are much more like the group that can be expected to enter these occupations than was true in 1960. In most of the groups mentioned, the scores are at least a half a standard deviation higher than the average scores in 1960. Similarly, the scores for the boys planning to enter fields of skilled workers, structural workers, and barbers or beauticians tend to be lower in 1970 than in 1960. This again is in accordance with realistic expectations for these students.

These findings strongly suggest a substantial improvement in the effectiveness of the guidance programs in our secondary schools. Apparently in this field, the increased expenditures over the past ten years have produced significant improvements in the occupational planning of our students.

Another group of items was aimed at discovering trends in the appropriateness and effectiveness of the schools' instructional programs. In a number of these areas little improvement has occurred. There are still about half of the students that say "About half the time or more frequently I have a difficult time in expressing myself in written reports, examinations, and assignments." Forty-one percent of the students say that "Half the time or more frequently I seem to accomplish very little compared to the amount of time I spend studying." About 30% of the students continue to say that "About half the time or more frequently, slow reading holds me back in my school work."

There is little change in some of the study skills. For example, 53% still say that "About half the time or more frequently I don't seem to be able to concentrate on what I read. My mind wanders and many things distract me." The students report a little improvement in certain study skills. For example, 62% report that "Most of the time or almost always when studying for a test I am able to pick out important points to learn." This represents an improvement of 6 percentage points since 1960. A similar improvement is noted in that 85% of the students report that "Most of the time or almost always I make sure that I understand what I am to do before I start an assignment." This compares with 74% in 1960.

There is a decrease to 23% in 1970 as compared with 28% in 1960 of those reporting that "Most of the time or almost always I feel that I am taking courses that will not help me much in an occupation after I leave school." On the other hand, 55% of the eleventh graders in 1970 say that "About half the time or more frequently lack of interest in my schoolwork makes it difficult for me to keep my attention on what I am doing." This contrasts with 49% in 1960. In the 1970 survey only 33% of the students said "About half the time or more frequently, I read material over and over again without really understanding what I have read." In 1960 the corresponding figure was 6 percentage points higher.

Three questions provide comparisons of the activities of the students in 1970 as compared with 1960. In answer to the question, "During the school year, about how many hours a week do you work for pay? Do not include chores done around your home." 49% of the boys and 28% of the girls indicated that they worked 6 hours or more per week for pay. These represent increases of 5% for the boys and 4% for the girls. In 1970, 66% of the boys and 53% of the girls report that "on the average they study less than 10 hours a week including study periods in schools as well as studying at home." This figure was 6 percentage points smaller for boys and 4 percentage points smaller for girls in 1960. There is very little change reported by either the boys or the girls in answer to the question, "How many books have you read not including those required for school in the past 12 months? Don't count magazines or comic books." Forty-six percent of the boys and 55% of the girls report that they have read 6 or more books in that period. This represents a 1% increase for boys and a 4% increase for girls in terms of percentage points.

There was very little change for either the boys or the girls in answer to the question, "How many days were you absent from school in the last school year?" There was a slight decrease in the number reporting they were absent 15 or more days from 12% in 1960 to 10% in 1970. In answer to the question, "Which of the following best describes your usual physical health in the last three years?" 73% of the boys and 65% of the girls report "very good" or "excellent." These represent decreases of 3 percentage points in each case from the 1960 figures.

Four new items were added to the 1970 survey. In answer to the question "Are you satisfied with the progress you are making to develop your abilities in reading, thinking, and writing?" 44% of the boys and 49% of the girls reported they were "satisfied," while 22% of the boys and 20% of the girls reported they were "dissatisfied." In reply to the question, "During the past year did you improve your understanding of your abilities and interests in relation to possible career opportunities?", 50% of the boys and 52% of the girls reported "much" or "very much," while 13%

of the boys and 11% of the girls reported only "a little" or "not at all." In answer to the question, "In relation to what you could have learned with the best learning methods and materials, how much did you learn during the past year?" 43% of both the boys and the girls indicated they felt they learned about 10% to 50% as much as they could have learned. Only about 12% of both the boys and the girls thought they learned 90% as much as they could have. In reply to the question, "How well do your school courses meet your needs?" 51% of the boys and 61% of the girls report "well" or "very well." Eighteen percent of the boys and 11% of the girls report "a little" or "not at all."

Summary and Conclusions

This sample national survey to compare results for students in the eleventh grade in 1970 with the students tested on a national basis in 1960 leads to several important conclusions.

1. There has been little improvement in the reading skills developed in the first eleven years of school by students in the United States between 1960 and 1970.
2. The guidance programs in American schools appear to have been more effective in recent years than they were prior to 1960. The students indicate they have had somewhat more useful discussions with their counselors, have learned about their own abilities and potentialities, and are selecting more realistic occupations as a part of their career planning. The data suggest, in spite of the real progress that has been made, there is still room for substantial improvement in the guidance procedures and the individual planning for educational programs.

3. The instructional program has improved very little in its quality and effectiveness according to the reports of these eleventh graders in 1970 as compared with the reports in 1960.
4. Students report they are working more, studying less, and reading books to about the same degree as in 1960. Although about half of the students indicate that school courses are meeting their needs fairly well and they are fairly well satisfied with the progress they are making, nearly half of them feel that they are learning only about half as much as they could with a more appropriate instructional system.
5. There is a slight decrease in the number of both boys and girls who were absent from school 15 or more days. Otherwise attendance is very much the same as it was 10 years ago.
6. There is a slight, but consistent trend toward describing their health as not quite as good as the comparable group of eleventh graders in 1960. Even though small, such a trend is certainly disturbing and it seems not unreasonable to link it to the increased use of stimulants by some of these students.

This study of the Progress in Education from 1960 to 1970 indicates that there is an urgent need for the systematic development of educational programs designed to make major improvements in the quality of education obtained by our young people. Specifically, studies of individual educational needs, systematic evaluations of plans and progress, and systems to manage educational improvement efforts should be implemented as soon as possible.

APPENDIX A

WEIGHTED 1960 AND 1970 RESPONSES TO SIB ITEMS

1960[1]			1970[2]			
M	F	T	M	F	T	
						49. During the school year, about how many hours a week do you work for pay? Do not include chores done around your own home.
39.2	53.3	46.9	34.3	52.7	44.0	A. None
17.3	21.6	19.5	17.1	18.8	18.0	B. About 1-5 hours
13.2	9.8	11.4	11.8	10.2	11.0	C. About 6-10 hours
8.8	5.2	7.0	10.3	6.8	8.5	D. About 11-15 hours
21.6	10.0	15.6	26.5	11.5	18.6	E. About 16 hours or more
						50. What is the greatest amount of education you expect to have during your life?
27.6	28.9	28.2	13.9	14.9	14.4	A. I don't expect to get any education beyond high school.
12.8	25.1	20.0	24.8	30.0	27.5	B. I expect to obtain vocational, business school, or junior college training.
9.9	10.6	10.2	11.1	12.4	11.8	C. I expect to obtain some (less than 4 years) regular college training.
32.4	25.6	28.8	30.7	30.5	30.6	D. I expect to graduate from a regular four-year college.
17.5	9.3	13.1	19.4	12.2	15.6	E. I expect to study for an advanced college degree.
						51. How much education do your parents or guardians want you to have?
12.9	13.5	13.0	9.2	10.2	9.7	A. High school only
13.3	27.0	20.9	14.8	24.2	19.8	B. Vocational school, business school, or junior college
48.8	36.7	42.2	45.3	40.9	43.0	C. A college degree
9.6	5.6	7.4	13.2	8.2	10.6	D. Professional or graduate school
15.6	17.7	16.7	17.4	16.5	17.0	E. I don't know

[1]1960 data weighted to represent total national sample and corrected to remove influence of schools less than ten years old.

[2]1970 data weighted to represent total national sample.

1960			1970		
M	F	T	M	F	T

52. Which one of the following high school programs or curriculums is most like the one that you are taking? If you have not yet been assigned to a program, which do you expect you will take?

23.7	19.7	21.7	27.5	24.4	25.9	A. General--a program that does not necessarily prepare you for either college or work, but in which you take subjects required for graduation and may subjects that you like.
45.6	36.7	41.1	46.0	42.7	44.3	B. College Preparatory--a program that gives you the training and credits needed to work toward a regular Bachelor's degree in college.
7.6	33.4	21.9	5.9	25.6	16.3	C. Commercial or Business--a program that prepares you to work in an office: for example, as a secretary or bookkeeper.
13.1	3.8	8.3	16.7	5.9	11.0	D. Vocational--a program that prepares you to work in a shop or factory or to enter a trade school or become and apprentice after high school.
10.0	4.3	7.2	3.9	1.4	2.6	E. Agriculture or a program very different from the above.

Items 53 through 59 present one continuous list of possible occupation. From this list choose the <u>one</u> occupation you <u>expect</u> to make your career after you have completed your education and mark the corresponding space on your answer sheet. This means that only one of the following 35 responses will be marked; the other 34 answer spaces should be left blank. <u>If your choice of occupations is not included in this list, mark the one that is closest to it. Mark one of these even if you have not definitely made up your mind</u>.

1960[1]		1970[2]		
M	F	M	F	
3.5	2.2	2.1	1.8	53A. Accountant
2.0	1.0	3.4	1.9	53B. Biological scientist (biologist, botanist, physiologist, zoologist, etc.)
0.5	0.4	1.0	0.9	53C. College professor
1.9	0.3	1.5	0.3	53D. Dentist
18.4	0.3	13.9	0.5	53E. Engineer (aeronautical, civil, chemical, mechanical, etc.)
0.6	7.9	0.5	8.6	54A. Elementary school teacher
4.0	6.2	5.8	8.0	54B. High school teacher
3.4	0.6	4.5	1.0	54C. Lawyer
1.7	0.8	1.4	1.4	54D. Mathematician
1.5	0.6	0.4	0.2	54E. Pharmacist
1.6	0.3	1.0	0.4	55A. Clergyman (minister, priest, rabbi, etc.)
3.4	0.7	2.2	0.5	55B. Physical scientist (chemist, geologist, physicist, astronomer, etc.)
2.8	0.9	2.9	1.2	55C. Physician
0.3	0.2	0.9	0.5	55D. Political scientist or economist
0.6	2.6	1.2	5.5	55E. Social worker
0.6	1.3	1.4	3.2	56A. Sociologist or psychologist
6.0	1.0	1.9	0.4	56B. Armed forces officer
2.1	2.9	3.2	4.4	56C. Artist or entertainer
5.1	0.5	5.1	0.5	56D. Businessman
1.4	0.0	1.4	0.1	56E. Craftsman
3.0	0.1	3.7	0.2	57A. Forester
1.5	2.0	1.0	2.6	57B. Medical or dental technician or engineering or scientific aide
0.1	11.6	0.1	8.6	57C. Nurse
2.7	0.6	2.6	1.0	57D. Pilot, airplane
1.9	0.3	3.0	0.3	57E. Policeman or fireman

[1]1960 data corrected to represent the same reading comprehension ability as in corrected sample for 1970.

[2]1970 data compiled using only persons who selected one occupation as requested in directions.

1960		1970			
M	F	M	F		
0.4	26.2	0.3	21.2	58A.	Secretary, office clerk, or typist
0.5	1.0	1.2	1.7	58B.	Writer
0.6	4.7	0.5	3.8	58C.	Barber or beautician
2.5	0.1	2.3	0.1	58D.	Enlisted man in the armed forces
4.5	0.3	2.2	0.2	58E.	Farmer
0.2	11.8	0.2	6.5	59A.	Housewife
0.8	0.4	0.7	0.6	59B.	Salesman or saleswoman
5.5	0.1	10.4	0.1	59C.	Skilled worker (electrician, machinist, plumber, printer, etc.)
1.4	0.0	3.3	0.1	59D.	Structural worker (bricklayer, carpenter, painter, paper-hanger, etc.)
12.8	9.4	12.7	11.5	59E.	Some other occupation different from any above

60. How definite is your present choice of an occupation?

8.9	12.0	10.7	9.3	11.7	10.6
15.5	19.5	17.6	13.4	16.3	14.9
37.1	40.1	38.7	42.0	44.2	43.2
26.7	20.0	23.1	25.4	21.7	23.4
12.1	8.4	10.1	9.9	6.1	7.9

A. Completely decided
B. Very definite
C. Fairly definite
D. Indefinite
E. Completely undecided

61. What grade were you in when you decided upon your present choice of an occupation?

21.4	15.5	18.2	16.5	11.3	13.8
14.6	17.1	16.0	12.3	16.7	14.6
15.9	18.6	17.4	14.3	16.4	15.4
24.2	25.8	25.1	25.3	25.0	25.2
23.8	23.0	23.3	31.6	30.6	31.0

A. I have not decided upon an occupation
B. 8th grade or earlier
C. 9th grade
D. 10th grade
E. 11th or 12th grade

62. How many times have you discussed your plans for after high school with your father?

15.3	18.8	17.1	21.1	28.0	27.9
10.1	11.3	10.7	9.3	9.7	8.8
12.6	11.4	12.0	11.4	10.0	9.9
10.1	8.6	9.4	8.0	6.9	6.9
52.0	50.2	51.0	50.2	45.3	46.5

A. None
B. One
C. Two
D. Three
E. Four or more

1960			1970		
M	F	T	M	F	T
9.0	4.7	6.8	21.1	7.9	14.2
9.8	6.1	7.9	9.3	5.7	7.5
13.1	8.2	10.7	11.4	7.9	9.6
11.5	9.4	10.4	8.0	6.9	7.4
56.6	71.6	63.9	50.2	71.4	61.3

63. How many times have you discussed your plans for after high school with your mother?

A. None
B. One
C. Two
D. Three
E. Four or more

50.7	53.4	52.0	46.9	39.8	43.2
18.0	18.7	18.3	21.7	23.2	22.5
14.1	12.8	13.5	15.2	17.7	16.5
8.1	7.2	7.6	8.9	9.9	9.5
9.3	8.0	8.6	7.3	9.4	8.4

64. How many times have you discussed your plans for after high school with your school counselor?

A. None
B. One
C. Two
D. Three
E. Four or more

44.0	45.7	44.9	66.0	62.1	64.0
20.3	21.8	21.1	13.5	15.5	14.6
16.4	15.6	16.0	8.2	9.5	8.9
8.5	7.3	7.8	4.4	4.9	4.7
10.8	9.7	10.2	7.9	7.9	7.9

65. How many times have you discussed your plans for after high school with your teachers, principal, or assistant principal (not the school counselor)?

A. None
B. One
C. Two
D. Three
E. Four or more

How important will each of the factors in items 66 through 71 be to you in your choice of a job?

31.6	26.6	28.9	20.6	14.9	17.6
26.2	24.8	25.4	23.2	22.1	22.6
28.8	33.1	31.2	38.6	41.3	40.0
7.3	9.4	8.5	13.5	18.3	16.0
6.0	6.1	6.0	4.0	3.4	3.7

66. Good income to start or within a few years

A. Extremely important
B. Very important
C. Important
D. Neither important nor unimportant
E. Unimportant

1960			1970		
M	F	T	M	F	T
34.1	29.1	31.4	30.0	23.5	26.6
33.2	32.5	32.8	28.9	28.0	28.5
22.8	27.9	25.6	29.5	34.6	32.2
5.6	6.1	5.8	8.3	10.9	9.7
4.5	4.4	4.5	3.3	3.0	3.2

67. Job security and permanence

A. Extremely important
B. Very important
C. Important
D. Neither important nor unimportant
E. Unimportant

38.9	47.2	43.4	47.3	51.8	49.7
32.0	30.3	31.0	26.3	27.9	27.1
20.2	17.5	18.7	19.7	17.1	18.3
5.3	3.0	4.0	4.8	2.6	3.7
3.6	1.9	2.7	1.9	0.6	1.2

68. Work that seems important to me

A. Extremely important
B. Very important
C. Important
D. Neither important nor unimportant
E. Unimportant

29.8	24.4	26.9	39.8	38.2	39.0
29.0	28.0	28.5	24.2	26.8	25.6
26.8	29.5	28.2	25.5	26.2	25.9
9.5	12.8	11.3	9.2	7.4	8.3
4.8	5.3	5.1	1.3	1.3	1.3

69. Freedom to make my own decisions

A. Extremely important
B. Very important
C. Important
D. Neither important nor unimportant
E. Unimportant

38.8	33.3	35.8	32.1	21.1	26.3
30.2	28.4	29.2	28.5	25.5	26.9
19.2	23.8	21.7	26.0	32.5	29.4
6.2	8.8	7.8	9.5	15.9	12.9
5.8	5.8	5.7	3.9	5.0	4.5

70. Opportunity for promotion and advancement in the long run

A. Extremely important
B. Very important
C. Important
D. Neither important nor unimportant
E. Unimportant

29.9	45.5	38.5	28.7	41.9	35.7
27.5	27.6	27.5	28.7	30.1	29.4
25.4	19.4	22.1	28.3	21.2	24.6
10.2	4.8	7.2	10.8	5.5	8.0
7.1	2.7	4.7	3.5	1.3	2.4

71. Meeting and working with sociable, friendly people

A. Extremely important
B. Very important
C. Important
D. Neither important nor unimportant
E. Unimportant

1960			1970		
M	F	T	M	F	T

72. How many books have you read (not including those required for school) in the past 12 months? Don't count magazines or comic books.

14.6	8.8	11.7	13.4	6.2	9.6	A. None
41.1	39.8	40.4	41.0	38.4	39.6	B. 1-5
18.4	20.6	19.6	21.0	23.6	22.4	C. 6-10
9.5	11.0	10.2	10.1	12.8	11.5	D. 11-15
16.6	19.8	18.2	14.5	18.9	16.9	E. 16 or more

73. I have a difficult time expressing myself in written reports, examinations, and assignments.

12.3	11.9	12.1	11.1	9.1	10.0	A. Almost always
17.4	18.1	17.8	15.2	15.3	15.2	B. Most of the time
20.7	19.5	20.1	24.1	26.6	25.4	C. About half the time
31.8	32.5	32.1	35.8	36.3	36.1	D. Not very often
17.9	18.1	17.9	13.8	12.7	13.3	E, Almost never

74. I make sure that I understand what I am to do before I start an assignment.

28.7	37.1	33.0	37.7	46.4	42.3	A. Almost always
39.2	42.2	40.7	43.4	41.3	42.3	B. Most of the time
20.0	4.0	16.9	12.7	9.1	10.8	C. About half the time
8.9	5.4	7.1	4.9	2.5	3.6	D. Not very often
3.3	1.3	2.3	1.4	0.7	1.0	E. Almost never

75. I seem to accomplish very little compared to the amount of time I spend studying.

7.4	7.9	7.7	7.2	6.5	6.8	A. Almost always
14.8	14.9	14.8	13.1	12.2	12.6	B. Most of the time
22.2	21.0	21.6	20.5	22.1	21.4	C. About half the time
36.3	39.8	38.1	38.5	41.6	40.2	D. Not very often
19.3	16.5	17.9	20.7	17.5	19.0	E. Almost never

76. Lack of interest in my school work makes it difficult for me to keep my attention on what I am doing.

14.8	9.8	12.3	17.4	11.1	14.1	A. Almost always
17.6	12.3	14.9	18.2	13.0	15.5	B. Most of the time
23.5	19.7	21.5	26.1	25.2	25.6	C. About half the time
28.8	35.4	32.2	29.0	36.1	32.7	D. Not very often
15.4	22.8	19.2	9.3	14.5	12.1	E. Almost never

1960			1970		
M	F	T	M	F	T
8.7	5.7	7.2	8.6	6.6	7.6
10.9	7.2	9.0	10.5	6.7	8.5
14.5	11.4	13.0	15.2	12.7	13.8
27.2	27.1	27.1	28.2	29.5	28.9
38.8	48.5	43.8	37.4	44.5	41.2

77. Slow reading holds me back in my schoolwork.

A. Almost always
B. Most of the time
C. About half the time
D. Not very often
E. Almost never

7.7	9.3	8.5	7.1	6.0	6.5
11.6	11.9	11.7	8.0	8.1	8.1
17.7	18.6	18.2	17.0	18.8	18.0
36.9	38.0	37.4	43.0	45.1	44.1
26.3	22.3	24.2	24.9	22.0	23.3

78. I read material over and over again without really understanding what I have read.

A. Almost always
B. Most of the time
C. About half the time
D. Not very often
E. Almost never

14.6	14.7	14.6	13.1	8.1	10.4
15.4	11.7	13.4	14.6	11.5	12.9
18.7	13.7	16.1	24.2	19.9	21.9
23.8	21.9	22.8	27.9	28.0	27.9
27.7	38.1	33.0	20.1	32.6	26.7

79. I feel that I am taking courses that will not help me much in an occupation after I leave school.

A. Almost always
B. Most of the time
C. About half the time
D. Not very often
E. Almost never

18.1	21.0	19.5	19.7	23.4	21.7
35.4	37.7	36.6	40.9	40.6	40.7
27.5	25.5	26.5	25.5	23.4	24.4
13.5	11.2	12.3	9.7	9.4	9.5
5.5	5.1	5.1	4.3	3.2	3.7

80. When studying for a test, I am able to pick out important points to learn.

A. Almost always
B. Most of the time
C. About half the time
D. Not very often
E. Almost never

11.4	10.1	10.8	12.1	9.3	10.6
17.4	13.8	15.6	15.0	11.7	13.2
28.2	28.8	28.5	27.4	30.0	28.8
31.3	35.4	33.4	34.8	37.6	36.3
11.7	11.8	12.1	10.6	11.4	11.0

81. I don't seem to be able to concentrate on what I read. My mind wanders and many things distract me.

A. Almost always
B. Most of the time
C. About half the time
D. Not very often
E. Almost never

1960			1970		
M	F	T	M	F	T
27.8	17.4	22.5	31.3	19.7	25.1
32.6	31.2	31.9	34.7	32.9	33.7
22.6	26.0	24.3	22.4	27.2	25.0
11.5	17.1	14.3	7.5	14.4	11.2
5.7	8.5	7.1	4.0	5.8	5.0

82. On the average, how many hours do you study each week? Include study periods in school as well as studying at home.

A. About 0-4 hours per week
B. About 5-9 hours per week
C. About 10-14 hours per week
D. About 15-19 hours per week
E. About 20 or more hours per week

9.0	7.6	8.2
34.7	41.3	38.2
34.6	30.9	32.6
16.1	16.1	16.1
5.6	4.1	4.8

83. Are you satisfied with the progress you are making to develop your abilities in reading, thinking, and writing?

A. Very satisfied
B. Satisfied
C. Neither satisfied nor dissatisfied
D. Dissatisfied
E. Very dissatisfied

24.8	23.8	24.3
24.7	28.3	26.6
37.5	37.2	37.4
9.7	7.9	8.7
3.4	2.8	3.1

84. During the past year did you improve your understanding of your abilities and interests in relation to possible career opportunities?

A. Very much
B. Much
C. Somewhat
D. Only a little
E. Not at all

12.0	11.8	11.9
44.6	45.2	44.9
30.2	33.1	31.7
9.4	7.1	8.2
3.8	2.8	3.3

85. In relation to what you could have learned with the best learning methods and materials, how much did you learn during the past year?

A. 90% as much
B. 70% as much
C. 50% as much
D. 30% as much
E. 10% as much

13.3	17.8	15.7
38.0	43.3	40.9
30.2	27.9	29.0
13.9	8.2	10.9
4.5	2.7	3.5

86. How well do your school courses meet your needs?

A. Very well
B. Well
C. Somewhat
D. A little
E. Not at all

1960			1970		
M	F	T	M	F	T
11.7	9.5	10.6	12.4	9.1	10.6
38.5	37.7	38.0	40.6	38.7	39.6
26.1	27.1	26.5	24.1	27.1	25.7
12.0	12.9	12.5	12.9	14.2	13.6
11.7	12.9	12.3	9.9	11.0	10.5

87. How many days were you absent from school in the last school year?

A. None
B. One to four days
C. Five to nine days
D. Ten to fourteen days
E. Fifteen or more days

88. Which of the following best describes your usual physical health in the last three years?

38.5	28.4	33.3	37.6	27.8	32.4
37.8	39.4	38.6	35.7	37.0	36.4
15.4	17.9	16.7	17.5	20.5	19.1
7.0	12.2	9.7	6.8	11.6	9.4
1.3	2.1	1.7	2.4	3.0	2.7

A. Excellent
B. Very good
C. Good
D. Average
E. Poor

APPENDIX B

WEIGHTED

READING COMPREHENSION SCORES BY CAREER SELECTION*

CAREER	1960 % M	1960 % F	1970 % M	1970 % F	1960 MEAN M	1960 MEAN F	1970 MEAN M	1970 MEAN F
Accountant	3.5	2.1	2.1	1.7	29.28	27.48	29.24	27.88
Biological Scientist	1.9	1.1	3.3	1.8	33.15	36.14	38.84	38.80
College Professor	0.5	0.4	1.0	0.9	33.15	36.14	38.84	38.80
Dentist	1.9	0.3	1.5	0.3	31.98	29.40	33.66	21.13
Engineer	18.3	0.3	13.8	0.5	33.71	34.34	33.58	35.18
Elementary School Teacher	0.6	7.9	0.5	8.6	26.52	34.06	31.85	35.15
High School Teacher	3.8	7.1	6.0	8.3	33.28	36.57	34.70	37.49
Lawyer	3.3	0.6	4.6	1.0	34.16	33.23	38.90	35.27
Mathematician	1.8	0.8	1.5	1.4	33.42	34.80	40.27	36.90
Pharmacist	1.6	0.6	0.5	0.2	30.72	29.04	36.73	38.03
Clergyman	1.6	0.4	1.0	0.5	36.41	35.03	37.41	32.70
Physical Scientist	3.1	0.6	1.9	0.6	38.91	38.60	39.93	34.42
Physician	2.8	0.9	2.9	1.2	37.31	36.37	38.18	36.47
Political Scientist or Economist	0.3	0.2	0.9	0.5	34.71	37.66	41.06	36.20
Social Worker	0.7	2.3	1.3	5.2	22.96	32.59	28.36	32.59
Sociologist or Psychologist	0.6	1.4	1.4	3.3	35.81	38.22	44.58	38.04
Armed Forces Officer	6.2	0.8	2.1	0.2	29.53	27.68	28.31	24.67
Artist or Entertainer	2.0	2.9	3.1	4.4	31.89	35.19	32.15	37.32
Businessman	4.9	0.5	4.9	0.5	31.52	29.64	31.50	20.81
Craftsman	1.6	0.0	1.6	0.1	25.87	25.41	25.50	34.16

*1970 data corrected to compensate for the necessary elimination of students making multiple occupational choices in 1970.

CAREER	1960 % M	1960 % F	1970 % M	1970 % F	1960 MEAN M	1960 MEAN F	1970 MEAN M	1970 MEAN F
Forester	2.9	0.1	3.6	0.2	31.51	30.21	32.79	40.24
Medical or Dental Technician or Engineering or Scientific Aide	1.5	1.9	1.0	2.5	30.72	35.68	33.38	35.85
Nurse	0.2	11.3	0.2	8.3	25.83	30.86	26.47	29.10
Pilot, Airplane	2.7	0.6	2.6	1.0	30.50	30.76	31.52	30.76
Policeman or Fireman	2.0	0.1	3.1	0.1	26.78	27.77	29.65	28.13
Secretary, Office Clerk, Typist	0.5	25.8	0.4	20.8	26.08	29.87	25.56	26.76
Writer	0.5	0.9	1.2	1.6	36.84	38.42	38.18	43.96
Barber or Beautician	0.8	4.8	0.7	3.9	23.89	26.65	17.35	27.03
Enlisted Man in the Armed Forces	2.4	0.1	2.2	0.1	29.55	24.70	27.93	22.57
Farmer	4.9	0.3	2.6	0.2	26.45	30.51	29.88	32.23
Housewife	0.2	12.8	0.2	7.5	22.10	29.66	24.97	26.49
Salesman or Saleswoman	0.8	0.5	0.7	0.7	29.17	27.71	30.07	25.71
Skilled Worker	5.4	0.1	10.3	0.1	28.66	25.27	27.04	12.87*
Structural Worker	1.4	0.0	3.3	0.1	25.13	27.05	23.97	22.62
Some other occupation	13.3	9.3	13.2	11.4	29.02	31.90	27.86	27.47
TOTAL	99.8	99.3	99.9	99.8	32.23	33.31	33.20	33.33

*This mean is based on a sample of only four girls.